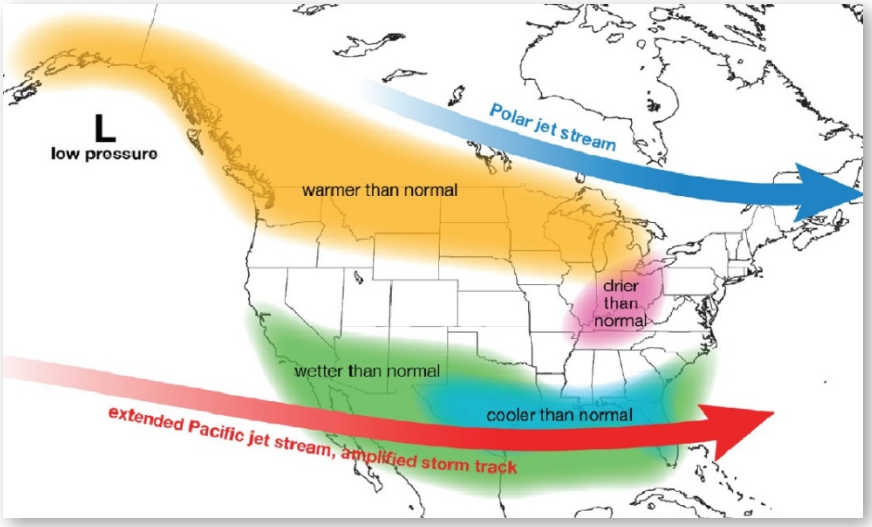
National Weather Service
Tallahassee, Florida

Local El Niño Impacts

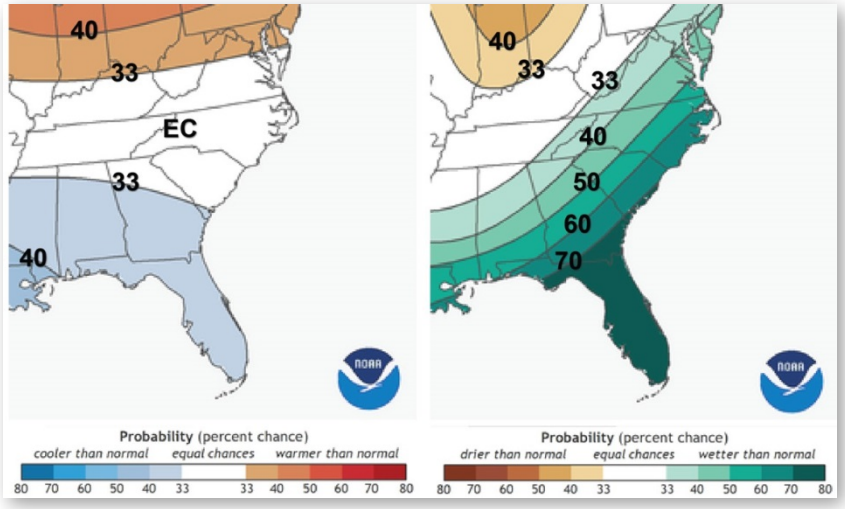
El Niño Basics

El Niño is a pronounced warming of the waters of the equatorial Pacific Ocean that occurs on average every 2 to 7 years. The ongoing El Niño is the strongest on record. The phenomenon can have far-reaching impacts across the globe. The Southeast U.S. is one area where El Niño's impacts can be significant due to a more pronounced jet stream across the region. This typically results in more storm systems tracking across the Deep South with wetter conditions the most reliable result.



Local Expected Impacts

- High degree of confidence in wetter than normal conditions through Spring.
- Increased threat for areal and riverine flooding, the latter of which will be detailed in the following section.
- While more systems will impact the Gulf Coast region, the severe weather threat will depend on each individual system's storm track. Unlike across peninsular Florida, there is NOT an appreciable uptick in severe weather across our region during El Niño years.



- Cooler than normal daytime temperatures are typical during El Niño years due to increased clouds and precipitation, but "arctic" outbreaks of cold weather are less likely (but still possible). This typical El Niño temperature pattern may not kick in until after December this time around as the latest monthly outlook from the Climate Prediction Center shows high confidence that we will see a continuation of recent above normal temperatures.

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El Niño Hydrologic Impacts

El Niño Climatology

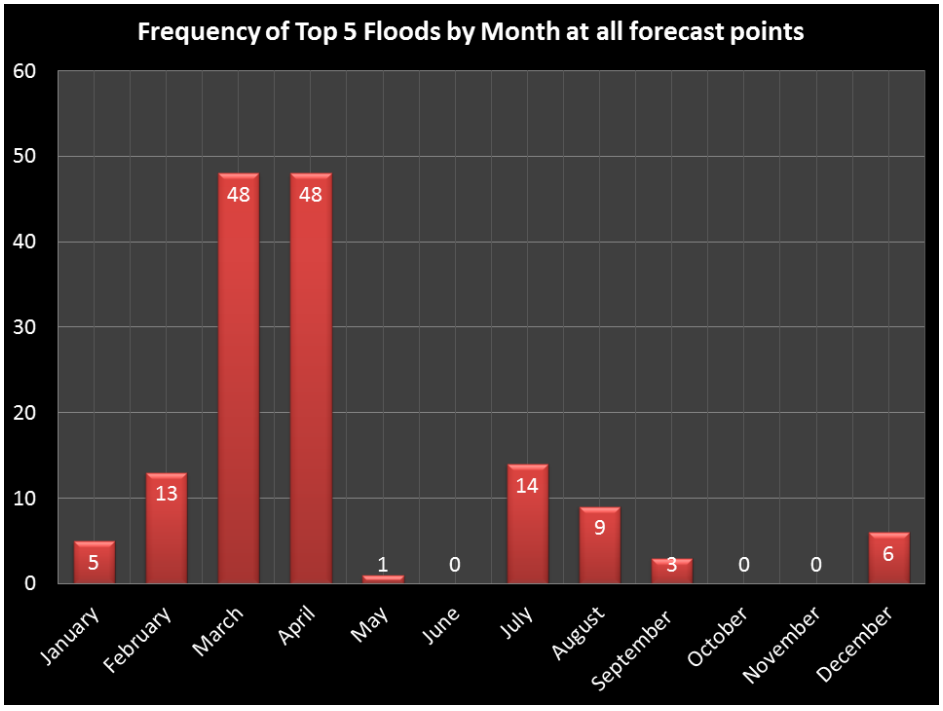
Since 1950, there have been 19 separate El Niño events. Four of these events were measured as strong El Niño events, including this upcoming winter season. Each of the strong events had noteworthy impacts across the region in March and April. Significant river floods, some at record levels, occurred during Spring 1973, 1998, and 2009. Examining these past events provides some idea of the degree of impacts expected with an El Niño event, but much like predicting impacts from an above normal hurricane season forecast, specific details are impossible to identify at long ranges.

El Nino winters since 1950

1951-1952	**1986-1987**
1952-1953	**1987-1988**
1957-1958	**1991-1992**
1958-1959	1994-1995
1963-1964	**1997-1998**
1965-1966	**2002-2003**
1969-1970	2004-2005
1972-1973	**2009-2010**
1976-1977	**2015-???**
1982-1983	

Local Impacts

Examining historical flood records for the seven major river basins across the region shows a distinct signal for the timing of significant flood impacts at our river forecast points. The graph at right better helps illustrate this point.

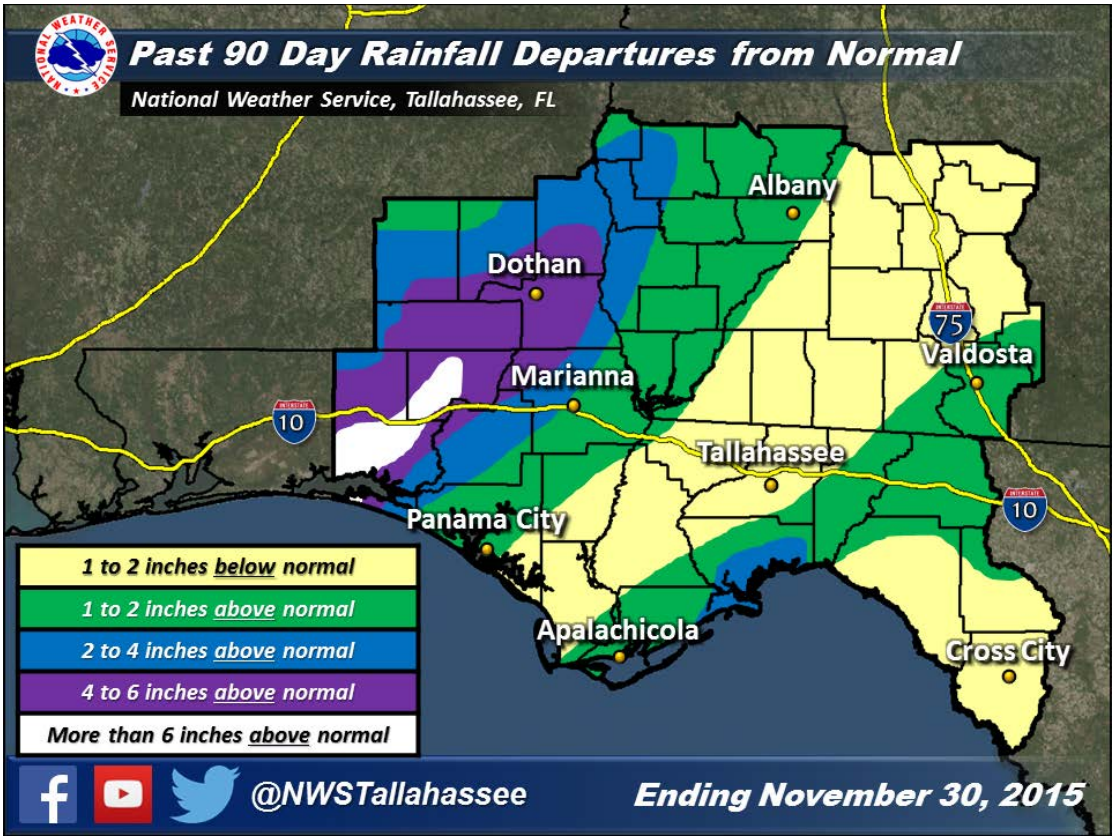


65% of the top 5 flood events across our forecast area have occurred during the months of March and April. The large majority of these events occurred outside the Suwannee River basin in March. Then, the focus for significant flooding largely shifts to the Suwannee

What we know now....

- Above normal precipitation has occurred across much of the region during the fall, some notably significant across the Florida Panhandle and Southeast Alabama.

- The above normal precipitation has stream flows well above normal in the Florida Panhandle and Southeast Alabama and near normal elsewhere.



- Past moderate and strong El Niño events have resulted in **43** top 5 flood events at river forecast points in all 7 major river basins since 1950. These major river flood basins are: Choctawhatchee, Chattahoochee, Apalachicola, Flint, Ochlockonee, Withlacoochee, and Suwannee Rivers.

What we expect...

- Current conditions and expected rainfall suggest at least a moderate flood risk this winter across the region.

- The Choctawhatchee River System is especially vulnerable to significant flooding this winter.

- Later this spring, expected heavy rainfall should create a significant flood risk within the Suwannee River System in late March and April.